Amendments to the Specification:

Please replace paragraphs [0011], [0014], [0027], [0034], and [0037] with the following amended paragraphs:

[0001] In some embodiments the silicon oxide layer may be a pre-metal dielectric layer. The substrate may include nickel silicide. The method may include providing a flow of a phosphorous-containing process gas to the chamber during a time period. The flow of silicon-containing process gas is provided at least partly during the time period. The silicon-containing process gas may include TEOS and the phosphorous-containing process gas may include ~~TEPo~~TEPO.

[0002] In some embodiments, the P-doped silicon oxide layer comprises a pre-metal dielectric layer. The substrate may include nickel silicide. The silicon-containing process gas may include TEOS and the phosphorous-containing process gas may include ~~TEPo~~TEPO.

[0003] The oxide-filled trench 100 may form part of a PMD structure. Traditionally, boron- and phosphorous-doped silicate glass (BPSG) formed in a sub-atmospheric chemical vapor deposition (SACVD) process has been used for PMD. Such films, however, typically require a high temperature anneal that takes the oxide beyond a glass transition temperature and allows it to reflow, thus removing voids, in most cases. The use of modern materials, such as nickel silicide, (used, for example, in connectors) are incompatible with high temperature anneal processes as their inclusion in an integrated circuit may require that the substrate upon which the circuit is fabricated not be subjected to temperatures above 500°C.

[0004] Cap layer deposition 304 may take place *in situ*. For example, if conformal layer deposition 302 takes place in a CVD chamber, then cap layer deposition 304 may take place in the same chamber immediately thereafter. Cap layer deposition 304 alternatively may take place *ex situ* by forming the cap layer in another chamber of a multi-chamber system or by forming it in a different chamber system. Cap layer deposition 302 comprises flowing a phosphorous-containing gas 314. In some embodiments, the phosphorous-containing gas comprises triethylphosphate (~~TEPo~~TEPO) or PH_3. Cap layer deposition 304 also may include flowing a silicon-containing process gas and an oxidizing process gas as described above for conformal layer deposition 302.

[0005] Conformal layer deposition 402 includes providing a silicon-containing process gas 406, an oxidizing process gas 408, and a phosphorous-containing process gas 410. The silicon-containing process gas may comprises tetraethylorthosilicate (TEOS) or other silicon-containing gases, such as SiH_4, S_2H_6, S_3H_8. The oxidizing process gas may comprises ozone (O_3), O_2, H_2O, H_2O_2, or the like. In a specific embodiment, the phosphorous-containing gas comprises ~~TEPo~~TEPO. Although this embodiment relates to depositing a P-doped conformal layer, additional dopants also may be used. For example, a flow of SiF_4 may be used to fluorinate the film, a flow of PH_3 may be used to phosphorate the film, a flow of B_2H_6 may be used to boronate the film, a flow of N_2 may be used to nitrogenate the film, and the like.